

the intensive management program (ER 1105-2-10). The appropriateness for including such measures will be based upon a consideration of factors which may include, but are not limited to:

- (i) Level of significance of the EQ resource.
- (ii) Proximity to the proposed water resource development.
- (iii) Acceptability and support for Corps implementation.
- (iv) Certainty of the pending loss or significant degradation of the EQ resource in the absence of implementing the proposed EQ measure.
- (v) Relationship of the EQ measures to implementing the proposed water resources development.
- (vi) Relationship of the EQ measures to assigned missions of other agencies and the capability for timely implementation by these agencies.
- (vii) Cost effectiveness.

§ 236.6 Other agencies EQ measures.

The selected plan may include EQ measures not proposed for Corps implementation, but to be accomplished through other Federal programs or by local interests. Planning reports including such measures will discuss how they would impact on the recommended plan, and how they may be implemented by the appropriate Federal agency or the local interests. However, implementation of such measures will not be required as local cooperation for the works proposed for Corps implementation.

PART 238—WATER RESOURCES POLICIES AND AUTHORITIES: FLOOD DAMAGE REDUCTION MEASURES IN URBAN AREAS

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§ 238.1 Purpose.

This regulation provides policies and guidance for Corps of Engineers participation in urban flood damage reduction projects and establishes criteria to distinguish between improvements to be accomplished by the Corps under its flood control authorities and storm sewer systems to be accomplished by local interests.

§ 238.2 Applicability.

This regulation is applicable to all OCE elements and all field operating activities having Civil Works responsibilities.

§ 238.3 References.

- (a) Executive Order 11988—Floodplain Management, dated 24 May 1977.
- (b) U.S. Water Resources Council, Floodplain Management Guidelines, (43 FR 6030), to February 1978.
- (c) ER 1105-2-811.
- (d) ER 1140-2-302.
- (e) ER 1140-2-303.
- (f) EP 1165-2-2.

§ 238.4 Definitions.

For purposes of this regulation the following definitions apply:

(a) *Urban areas* are cities, towns, or other incorporated or unincorporated political subdivisions of States that:

(1) Provide general local government for specific population concentrations, and,

(2) Occupy an essentially continuous area of developed land, containing such structures as residences, public and commercial buildings, and industrial sites.

(b) *Flood damage reduction works in urban areas* are the adjustments in land use and the facilities (structural and non-structural) designed to reduce flood damages in urban areas from overflow or backwater due to major storms and snowmelt. They include structural and other engineering modifications to natural streams or to previously modified natural waterways. Flood damage reduction works are designed to modify flood behavior typified by temporary conditions of inundation of normally dry land from the

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overflow of rivers and streams or from abnormally high coastal waters due to sever storms.

(c) *Storm sewer systems* are the facilities in urban areas designed to collect and convey runoff from rainfall or snowmelt in the urban area to natural water courses or to previously modified natural waterways. They include storm drains, inlets, manholes, pipes, culverts, conduits, sewers and sewer appurtenances, on-site storage and detention basins, curbs and gutters, and other small drainageways that remove or help to manage runoff in urban areas. Storm sewer systems are designed to solve storm drainage problems, which are typified by excessive accumulation of runoff in depressions; overland sheet flow resulting from rapid snowmelt or rainfall; and excessive accumulation of water at the facilities listed in this paragraph because of their limited capacity.

§ 238.5 Comprehensive planning.

Coordinated comprehensive planning at the regional or river basin level, or for an urban or metropolitan area, can help to achieve solutions to flood problems that adequately reflect future changes in watershed conditions, and help to avoid short-sighted plans serving only localized situations. This planning is particularly important in areas where significant portions of a watershed are expected to be urbanized in the future. Changes in land use may result in major alterations of the runoff characteristics of the watershed. Hydrologic changes must be projected for the period of analysis. In this effort, responsible local planning organizations should provide information and assist the Corps in development of projected land uses and expected practices for collection and conveyance of runoff over the period of analysis. Conversely, the Corps may be able to provide non-Federal interests with valuable information about water related consequences of alternative land uses and drainage practices.

§ 238.6 General policy.

(a) Satisfactory resolution of water damage problems in urban areas often involves cooperation between local non-Federal interests and the Federal

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flood control agencies. In urban or urbanizing areas, provision of a basic drainage system to collect and convey the local runoff to a stream is a non-Federal responsibility. This regulation should not be interpreted to extend the flood damage reduction program into a system of pipes traditionally recognized as a storm drainage system. Flood damage reduction works generally address discharges that represent a serious threat to life and property. The decision criteria outlined below therefore exclude from consideration under flood control authorities small streams and ditches with carrying capacities typical of storm sewer pipes. Location of political boundaries will not be used as a basis for specifying project responsibility. Project responsibilities can be specified as follows:

(1) Flood damage reduction works, as defined in this regulation, may be accomplished by the Corps of Engineers.

(2) Construction of storm sewer systems and components thereof will be a non-Federal responsibility. Non-Federal interests have a responsibility to design storm sewer systems so that residual damages are reduced to an acceptable level.

(b) Consideration will be given to the objectives and requirements of Executive Order 11988 (reference §238.3(a)) and the general guidelines therefor by the U.S. Water Resources Council (reference §238.3(b)).

§ 238.7 Decision criteria for participation.

(a) *Urban flood control.* (1) Urban water damage problems associated with a natural stream or modified natural waterway may be addressed under the flood control authorities downstream from the point where the flood discharge of such a stream or waterway within an urban area is greater than 800 cubic feet per second for the 10-percent flood (one chance in ten of being equalled or exceeded in any given year) under conditions expected to prevail during the period of analysis. Those drainage areas which lie entirely within the urban area (as established on the basis of future projections, in accordance with §238.5 of this part), and which are less than 1.5 square miles in